

CLAIMS

What is claimed is:

1. A device for aligning a first and a second shell mold, the device comprising:
  - a centering station comprising at least one spring element embracing a circular opening;
  - a first gripper for holding the first shell mold; and
  - a second gripper for holding the second shell mold,

wherein the first gripper and the second gripper are movable relative to each other and relative to the centering station along a predetermined axis and rotatable individually as well as synchronously on said axis, and wherein said axis runs through a center of the circular opening of the centering station.
2. The device according to claim 1, wherein the centering station has a body with a wall that forms the circular opening and has a groove, and wherein the at least one spring element is a closed or cut O-ring or a tube made of elastically deformable material that is inserted in the groove.
3. The device according to claim 1, wherein the first gripper and the second gripper bear on a common guide rail.
4. The device according to claim 2, wherein the first gripper and the second gripper bear on a common guide rail.
5. The device according to claim 1, further comprising:
  - a first motor for moving the first gripper along said axis;
  - a second motor for moving the second gripper along said axis;

- a third motor for rotating the first gripper on said axis; and
- a fourth motor for rotating the second gripper on said axis.

6. The device according to claim 2, further comprising:

- a first motor for moving the first gripper along said axis;
- a second motor for moving the second gripper along said axis;
- a third motor for rotating the first gripper on said axis; and
- a fourth motor for rotating the second gripper on said axis.

7. The device according to claim 3, further comprising:

- a first motor for moving the first gripper along said axis;
- a second motor for moving the second gripper along said axis;
- a third motor for rotating the first gripper on said axis; and
- a fourth motor for rotating the second gripper on said axis.

8. The device according to claim 4, further comprising:

- a first motor for moving the first gripper along said axis;
- a second motor for moving the second gripper along said axis;
- a third motor for rotating the first gripper on said axis; and
- a fourth motor for rotating the second gripper on said axis.

9. The device according to claim 1, further comprising:

- a device for applying a tape in order to join the two shell molds into a composite.

10. The device according to claim 2, further comprising:

a device for applying a tape in order to join the two shell molds into a composite.

11. The device according to claim 3, further comprising:  
a device for applying a tape in order to join the two shell molds into a composite.

12. The device according to claim 4, further comprising:  
a device for applying a tape in order to join the two shell molds into a composite.

13. The device according to claim 1, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

14. The device according to claim 2, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

15. The device according to claim 3, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

16. The device according to claim 4, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed

between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

17. The device according to claim 9, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

18. The device according to claim 10, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

19. The device according to claim 11, wherein the first gripper and the second gripper comprise a support, a sealing element arranged within the support to seal a cavity formed between the gripper and the shell mold, and a path absorbing element that enables deflection of the sealing element along said axis.

20. The device according to claim 1, wherein said at least one spring element is a plurality of spring elements formed as tongues that are arranged on a ring.